Aspidistus scutiformis Ckll.—On a Citrus fruit from Acapulco, Mexico. Com. Craw, who quarantined it at San Francisco.

Aspidistus dictyospermi Morgan.—On Pandamus in greenhouse, Santa Fé, New Mexico. Coll. Ckll. On Areca lutescens in greenhouse, Columbus, Ohio. Coll. J. S. Hine. Also found at Columbus in 1896 by Prof. Bogue.

## NOTES AND DESCRIPTIONS OF TRYPETIDÆ.

By D. W. Coquillett.

In the Wiener Entomol. Zeitung for 1882, page 192, Osten Sacken states in substance that *Trypeta*, Meigen, 1803, is a synonym of *Trupanea* Guettard, 1756, and of Schrank, 1798. Guettard used the term in a popular sense, and did not refer to any previously described species, nor did he give specific names to any of the species of which he wrote. His paper, therefore, must be regarded as a popular one, which does not in the least affect our binomial nomenclature. Moreover, it appeared two years earlier than the tenth edition of Linne's Systema Naturæ, which the majority of naturalists have adopted as the starting point of our nomenclature.

As to *Trupanea* Schrank, Osten Sacken overlooked the fact that this genus appeared in the *third* volume of that author's work, which was published in the year 1803, the same year in which *Trypeta* appeared. In a case of this kind, later writers are at liberty to choose either of the two names; and since *Trypeta* has been very generally adopted in the past, there is no good reason for not following this course.

At the time of treating of our Trypetidæ, Dr. Loew separated them into smaller groups which he sometimes referred to as genera but quite as often as subgenera, and as subgenera they are listed in the Osten Sacken catalogue. By changing some of the species, however, the greater part of the groups proposed by Loew are well worthy of being considered as valid genera.

Acrotoxa Loew, is a synonym of Anastrepha Schiner, as given in the Osten Sacken catalogue; but the African genus Leptoxyda, or Leptoxys Macquart, which is also given as a synonym, evidently is not the same genus, owing to the course of the fourth vein. The

species amabilis belongs to the preceding genus, Hexachæta, instead of to Anastrepha, under which it is placed in the catalogue.

#### Acidia uncinata, sp. nov.

Yellow, the abdomen largely brownish red, two spots on the metanotum, one on each side of the second abdominal segment and the ovipositor black, the hairs, bristles and antennal arista except its base, also black. Front, except the narrow lateral margins, reddish yellow, slightly longer than wide, face strongly retreating at the oral margin, antennæ three-fourths as long as the face, the third joint nearly twice as long as wide, rounded at the apex; body polished, scutellum bearing four bristles; ovipositor convex, scarcely longer than the preceding abdominal segment; wings yellow, dark brown and hyaline; the brown forms a spot on the humeral crossvein, a larger one covering the stigma, a small one in base of third posterior cell, another in its apex extending upward along the hind crossvein, finally a broad border to the wing from a short distance beyond apex of first vein to beyond apex of the fourtn; an elongate, whitish hyaline spot in middle of costal cell, another beyond middle of the first basal, one beyond apex of first vein extending to the third just before the small crossvein, a large one filling middle of first and second posterior cells encroaching on the submarginal and almost crossing the discal between the small and hind crossveins; axillary angle and middle of third posterior cell also hyaline; third vein bristly over almost its entire length, small crossvein near last third of discal cell; length, 5 mm.

Habitat: Ft. Wrangle, Alaska.

A female specimen collected by Prof. H. F. Wickham. Type No. 4306, U. S. National Museum.

Acidia fausta and suavis belong to Rhagoletis; the small crossvein is near or before the middle of the discal cell.

# Epochra rubida, sp. nov.

Yellow, the front, except its lateral margins, and the body reddish yellow, metanotum very thinly pruinose with grayish and marked with five indistinct darker vitte, body otherwise polished, the hairs and bristles black; face almost straight, slightly produced at the oral margin; third antennal joint rounded at the apex, scutellum bearing four bristles; ovipositor convex, scarcely longer than preceding segment of abdomen; wings hyaline, marked with five yellowish or brown crossbands; the first begins at the humeral crossvein and extends to the anal cell where it is connected with the second band; the latter begins on the stigma and extends to the apex of the anal cell; the third band begins a short distance beyond apex of first vein, passes over the small crossvein and almost reaches the hind margin of the wing slightly beyond apex of sixth vein; the fourth band begins a short distance before tip of second vein and passes over the hind crossvein; the fifth band begins at the costal end of the fourth and borders the wing to slightly beyond apex of fourth vein; third vein bristly to slightly beyond the small crossvein, the latter noticeably beyond middle of discal cell; length, 5 mm.

Habitat: Colorado.

Seven males and four females. Type No. 4397, U. S. National Museum.

Œdicarena diffusa Snow belongs to Straussia.

Zonosema basiolum Osten Sacken, and Spilographa setosa Doane are synonyms of flavonotata Macquart. The latter and electa Say belong to Zonosema.

### Zonosema vittigera, sp. nov.

Head yellow, face slightly convex, only slightly projecting at the oral margin, third antennal joint produced into a sharp point at the outer apical angle; thorax polished, dark yellow, metanotum marked with three whitish yellow vittæ, the median one tapering to a point anteriorly, the lateral ones each marked with a broad black vitta interrupted at the suture; a narrow black vitta extends from humerus to wing, a black spot back of each wing; pleura whitish yellow on upper edge and with a similar colored vitta near the middle, above this a black vitta which does not extend on the front part of pleura, a black spot in front of middle coxe; scutellum light yellow, its base brown and black, a black dot at each lower front angle; metanotum black, the upper corners yellowish; abdomen polished yellow, a black spot on each side of the fourth segment in the male, fifth in the female, ovipositor not longer than the last abdominal segment; legs yellow; bristles, including those fringing the hind tibiæ, black; wings hyaline, marked with four brown bands and a costal spot between the two median bands extending to the third vein; the first band extends from humeral crossvein to middle of last section of sixth vein, wing basally from this band, except behind sixth vein, yellowish; the second band begins at the stigma and passes over the small crossvein, almost reaching the wing-margin midway between apices of the fifth and sixth veins; the third band starts from just before apex of second vein and passes over the hind crossvein; the fourth band begins at costal end of the third band and borders the wing to slightly beyond tip of fourth vein; third vein bristly nearly to its apex, small crossvein at middle of discal cell; length, 5 to 6 mm.

Habitat: Eagle Pass, Texas (J. Cram), and Las Cruces and Mesilla,
N. Mex. (T. D. A. Cockerell). Two males and two females. Type
No. 4398, U. S. National Museum.

## Spilographa maculosa, sp. nov.

Light reddish yellow, face and cheeks grayish pruinose, a light yellow vitta on upper edge of pleura; face greatly retreating below, third joint of antennæ rounded at the apex, scutellum bearing four bristles; ovipositor flattened, slightly longer than the preceding abdominal segment; wings hyaline, an indistinct brownish band extends from forking of the second and third veins to apex of anal cell, a brown band, which is sometimes interrupted in the submarginal and discal cells, runs from the stigma over the small crossvein and stops midway between the fifth vein and the hind margin of the wing, hind crossvein and apex of fifth vein bordered with brown, a brown costal spot midway between apices of the first and second veins extending slightly below the second vein, broad apex of wing, usually from slightly before apex of second vein to slightly beyond apex of the fourth, brown; third vein bristly nearly to its apex, small crossvein noticeably before middle of discal cell; length, 4 to 5 mm.

Habitat: Colorado. Two males and two females. Type No. 4399, U. S. National Museum.

Trypeta straminea Doane is a synonym of occidentalis Snow. Neaspilota vernoniae Loew belongs to Trypeta.

## Trypeta notata, sp. nov.

Head and its members yellow, its hairs and bristles, and those of the entire insect also yellow; body black, the thorax and scutullum opaque, densely gray pruinose, scutullum bearing only two bristles, ovipositor convex, as long as the last two abdominal segments; legs yellow; wings hyaline, stigma, a costal dot nearly midway between it and apex of second vein, the extreme apex of marginal cell, a border to the small and hind crossveins, and a dot on the third vein above the latter, yellowish brown; third vein bare, small crossvein near second third of the discal cell; length, 4 mm.

Habitat: Albuquerque, N. Mex. Two females received from Prof.L. Bruner. Type No. 4400, U. S. National Museum.

## Trypeta undosa, sp. nov.

Head and its members yellow, third joint of antennæ rounded at the apex. Thorax yellow, metanotum black, thinly gray pruinose, a vitta each side of the middle and the broad lateral margin, yellow, a black spot back of each wing; scutellum yellow, bearing four bristles, a black spot at its apex; metanotum black, the sides yellow. Abdomen yellow, each segment marked with four black spots, ovipositor flattened, almost as long as the last three abdominal segments; legs yellow; wings hyaline, the base almost to apex of auxiliary vein yellowish except middle of front portion of second basal cell and behind the sixth vein; a yellowish band margined with brown starts at the costal portion of this spot, filling the stigma and extending over the small crossvein, stops halfway between the fifth vein and the wing-margin; a similar band begins a short distance beyond this one and extends over the hind crossvein to the wing-margin; from the costal end of this band another proceeds along the edge of the wing to slightly beyond apex of fourth vein; third vein bare, small crossvein slightly beyond middle of discal cell; length, 5 mm.

Habitat: Colorado.

A single female collected by Mr. C. F. Baker. Type No. 4401, U. S. National Museum.

## Œdaspis setigera, sp. nov.

Head and its members yellow, the occiput, except the sides, black; body polished black, thorax bearing three pairs of dorso-central bristles, the anterior pair inserted in front of the suture, ovipositor convex, slightly longer than the last three abdominal segments; legs yellow, the femora, except their apices, dark brown; wings hyaline, a black basal spot extending slightly beyond the humeral crossvein, and three brown bands connected at the costa, except sometimes the last one; the first is the broadest and extends transversely to the hind margin of the wing just before tip of sixth vein; the second band extends obliquely over both crossveins and reaches the hind margin of the wing at apex of the fifth vein, the hyaline spot between

this and the preceding land is in the form of a broad triangle; the last band borders the wing from near the stigma to beyond apex of the fourth vein, and is narrowly separated from the costa at least between apices of the second and third veins; third vein bare, small crossvein near the fourth fifth of the discal cell; length, 3 to 5 mm.

Habitat: Bristol, R. I. (Burgess); Va. (T. Pergande); Ga. (Morrison); Kirkwood, Mo. (Miss M. E. Murtfeldt), and Baldwin, Kan. (C. S. Parmenter). Six males and seven females. Type No. 4402, U. S. National Museum.

#### Aciura opaca, sp. nov.

Head and its members yellow, center of occiput grayish black, hairs and bristles of entire insect yellow; body black, the thorax and scutellum opaque, densely grayish pruinose, scutellum bearing only two bristles; ovipositor somewhat flattened, only slightly longer than the preceding abdominal segment; legs yellow, the femora except the apices blackish brown; wings at base nearly to base of discal cell hyaline, the remainder brown and hyaline; an elongate hyaline spot in first basal cell just beyond its middle, a hyaline band extends from costa nearly midway between apices of first and second veins and almost reaches the fifth vein, passing between the small and hind crossveins; an oblique hyaline spot in last third of first posterior cell almost in contact with a smaller one below the fourth vein; a triangular hyaline spot almost crossing the second posterior cell near its base, finally a large hyaline spot in middle of third posterior cell, communicating along the wing-margin with one in the axillary cell which in turn is in contact with the hyaline at base of wing; third vein bare, small crossvein noticeably beyond middle of discal cell; length, 4 mm.

Habitat: Elko, Nev. A single female specimen. Type No. 4403, U. S. National Museum.

## Aciura limata, sp. nov.

Reddish yellow, the abdomen and bristles black; body polished, scutellum bearing four bristles, ovipositor convex, about as long as the preceding abdominal segment; wings brown and hyaline, the base yellowish; a large hyaline spot near middle of costal cell, a sub-triangular one just beyond apex of first vein, reaching the third vein a short distance before the small crossvein, another a short distance beyond it, extending nearly halfway across the first posterior cell a short distance beyond the small crossvein, one at apex of fourth vein extending almost to second vein a short distance before its apex, one near middle of second posterior cell extending from the wing-margin across the first posterior cell almost parallel with the preceding spot, a small spot in discal cell on the fifth vein a short distance from the hind crossvein, a large one in third posterior cell beginning at tip of sixth vein and extending, attenuated and interrupted, obliquely to the one in the costal cell; axillary cell hyaline; third vein bare, small crossvein noticeably beyond middle of discal cell; length, 4.5 mm.

Habitat: New Bedford, Mass.

A single female specimen collected by Dr. Garry De N. Hough. Type No. 4404, U. S. Nat. Museum.

#### Aciura lutea, sp. nov.

Yellow, body polished, scutellum bearing only two bristles, ovipositor very convex, almost as long as the last three abdominal segments; wings brown and hyaline, two subquadrate hyaline spots in costal cell between humeral crossvein and apex of auxiliary vein, a subtriangular one just beyond end of first vein not extending below the second vein, and one a short distance beyond it which almost reaches the third vein, a rounded one just beyond the second third of first basal cell and a similar one in discal cell along the fourth vein just beyond the small crossvein, the middle of the second and third posterior cells, occupying about half the area of these cells, a small spot just before the apex of the fifth vein, a rounded one in front edge of the axillary cell, hyaline; broad hind margin of this cell grayish hyaline; third vein bristly at its base, small crossvein near the third fourth of the discal cell; length, 5 mm.

Habitat: Pareah, Utah.

A single female, received from A. L. Siler. Type No. 4405, U. S. Nat. Museum.

Carphotriche culta differs in too many respects from the type species to be retained in the same genus, and I have, therefore, made it the type of a new genus, as follows:

## Paracantha, gen. nov.

Upper half of front bearing a row of three whitish setæ nearly midway between the regular frontal row and the median line of the front, face in profile strongly concave, the oral margin considerably produced forward, scutellum not swollen, bearing four macrochactæ and three pairs of nearly erect yellow setæ a short distance inside of the margins; fourth vein not curved forward at its apex, small crossvein near the second third of the discal cell.

Eurosta conspurcata Doane is a synonym of reticulata Snow.

Trypeta aurifera Thomson, and Ensina humilis Loew, are synonyms of Acinia picciola Bigot; the latter belongs to Tephritis.

Euaresta æqualis Loew also belongs to Tephritis.

Tephritis nora Doane is a synonym of platyptera Loew.

T. affinis Snow is a synonym of finalis Loew; and T. obscuripennis Snow is a synonym of Trypeta genalis Thomson, which belongs to Tephritis.

Eutreta aurantiaca Doane, and E. tricolor Doane, also belong to Tephritis.

# Tephritis tenebrosa, sp. nov.

Head and its members yellow, the occiput grayish black, the two pairs of bristles in front of the inner vertical ones, and those fringing the occiput, white, the other bristles black; body black, opaque gray pruinose, the hairs white, bristles of thorax and scutellum black, those of the abdomen white, scutellum bearing four bristles, last three abdominal segments each marked with a dorsal pair of blackish spots; legs

yellow, the femora, except their apices, dark brown; wings dark brown, the base hyaline, including the costal and marginal cells to apex of auxiliary vein except a costal dot near middle of the former, the first basal cell to apex of the second basal cell, also the whole of the latter and of the anal cell; a hyaline spot just beyond apex of first vein extending to the third slightly beyond the small crossvein, a rounded spot just beyond this in the marginal cell, a smaller one on lower side of third vein just before the hind crossvein, three small marginal ones in the second posterior cell and a larger one along the fourth vein shortly beyond the hind crossvein, three marginal and about six discal spots in the third posterior cell, the hind margin and two spots along the sixth vein in the axillary cell, two in the discal along the fifth vein of which one is near the middle and the other which is about four times as large is toward the base; third vein bare, small crossvein noticeably beyond middle of discal cell; length, 3 mm.

Habitat: Custer Co., Col. A male specimen collected by Professor T. D. A. Cockerell. Type No. 4406, U. S. Nat. Museum.

#### Euaresta munda, sp. nov.

Head and its members yellow, center of occiput grayish black, face not projecting forward at the oral margin, antennæ scarcely reaching halfway to the oral margin; body black, thorax and scutellum opaque, densely gray pruinose, the hairs yellow, bristles brown, scutellum bearing two bristles; abdomen polished, its hairs black, ovipositor slightly convex, nearly as long as the last three segments of the abdomen; legs black, tarsi yellow, front tibiæ yellowish brown; wings dark brown, the following spots hyaline: two in costal cell, three between apices of first and second veins, the last two spots extending halfway across the submarginal cell, two between apices of second and third veins, the second extending into the first posterior cell, one in extreme apex of this cell, three between apices of fourth and fifth veins, the second almost crossing the cell, the last one extending into the first posterior cell, three between apices of fifth and sixth veins, two on front side of sixth vein of which one is beyond the middle of its last section and the other contiguous to the anal cell, three marginal and one discal in the axillary cell, one in front part of discal cell midway between the small and hind crossveins, finally one in posterior part of first basal cell opposite middle of discal cell; third vein bare, small crossveins near second third of discal cell; length, 3 mm.

Habitat: Elko, Nev.

A single female specimen. Type, No. 4407, U. S. Nat. Museum. Euaresta mundula, sp. nov.

Differs from the above description of *munda* only as follows: Pleura reddish brown, apex of scutellum yellow, legs yellow, none of the hyaline spots between apices of first and second veins extend into the submarginal cell, only two in axillary cell, none in the discal; length, 3 mm.

Habitat: Pareah, Utah.

A male specimen collected by Mr. A. L. Siler. Type No. 4408, U. S. Nat. Museum.

Trypeta acutangula Thomson is a synonym of Urellia abstersa Loew. The latter belongs to Euaresta.

Tephritis californica Doane and Urellia pacifica Doane are synonyms of Euaresta araneosa Coquillett.

Tephritis webbii Doane and Urellia aldrichii Doane, belong to Enaresta.

Urellia actinobola Loew and solaris Loew, are synonyms of Trypeta mevarna Walker, which is a true Urellia.

#### Urellia stigmatica, sp. nov.

Head and its members yellow, center of occiput gravish black, third joint of antennæ evenly rounded at the apex; body black, opaque, densely gray pruinose, the hairs whitish, bristles black, scutellum bearing four strong bristles, ovipositor flattened, almost as long as the last two abdominal segments; legs yellow, middle femora destitute of bristles on the under side; wings hyaline, a large black spot toward the apex, containing two small hyaline spots, one just beyond apex of second vein, the others on front side of fourth vein almost above the hind crossvein, and sending nine rays towards the wing-margin, all of which reach it except the two which cross the discal cell; the first ray, which is very much broader than any of the others, extends obliquely from the region of the small crossvein to the stigma which it fills excepting the lower basal corner, and also fills apex of first basal cell to middle of discal cell; the second ray crosses the marginal cell midway between apices of the first and second veins, the next two extend to the apices of the third and fourth veins, the following two cross the second basal cell, the next one borders the hind crossvein, the remaining two cross the discal cell, the first stopping a short distance from the wing-margin, the other ending in the center of the third posterior cell; third vein bare; length, 4 mm.

Habitat: Colorado. A specimen of each sex. Type No. 4409, U. S. Nat. Museum.

### Urellia bisetosa, sp. nov.

Differs from the above description of stigmatica as follows: Third joint of antennæ very oblique at apex, the front corner rounded, scutellum bearing only two bristles, ovipositor longer than the last three segments of the abdomen, black spot of wings sends out only eight rays, only one crossing the discal cell and this one stops at the fifth vein, the ray which in the preceding species extends to the center of the third posterior cell, is wanting in the present species; length, 4 mm.

Habitat: Las Cruces, N. Mexico (T. D. A. Cockerell), and Marysvale, Utah (M. E. Jones). A specimen of each sex.

Type No. 4410, U. S. Nat. Museum.

## Urellia nigricornis, sp. nov.

Differs from stigmatica as follows: Third joint of antennæ black, very oblique at its apex, scutellum bearing only two bristles, middle femora each bearing two or three long bristles on the under side just beyond the middle, no hyaline spot near apex of second vein, the black spot of wings sends out only six rays, none of which go to apex of the fourth vein nor cross the discal cell; the ray extending to the stigma is in the form of a subquadrate spot, two of its sides being nearly perpendicular to the costa, and the hyaline space between it and the next ray is also almost quadrangular and nearly as large as the first ray; the latter is almost separated from the brown of the small crossvein, the first basal cell being hyaline along its hind edge almost to its extreme apex; length, 3 mm.

Habitat: Colorado. A single male collected by Mr. C. F. Baker. Type No. 4411, U. S. Nat. Museum.

### Urellia radifera, sp. nov.

Differs from *stigmatica* as follows: Third joint of antennæ slightly oblique at the apex, scutellum bearing only two bristles, middle femora each bearing several bristles on the under side beyond the middle, black spot of wings sends out only four rays none of which extend to the stigma nor to apices of third and fourth veins, and none cross the discal cell, stigma yellowish hyaline; length, 2.5 mm.

Habitat: Tucson, Ariz. A male specimen collected April 21, 1897, by the late Mr. H. G. Hubbard. Type No. 4412, U. S. Nat. Museum.

As the table of genera given in Williston's manual is somewhat defective (*Epochra* is placed in the section in which the distal portion of the wing has two hyaline indentations of which the posterior one is in the second posterior cell, while none of the species are marked in this manner, and *Eutreta* is located in the group having the face spotted, although four of the five known species have it wholly unspotted), I subjoin a new table of the genera of this country north of Mexico. Three of the genera, *Œdicarena*, *Acidogona* and *Xenochæta*, are known to me only by the descriptions and figures:

I.	Small crossvein noticeably beyond middle of discal cell
	Small crossvein near or before middle of this cell. 2
2.	First vein not abruptly curved backward near its apex, stigma much longer than
	wide 3
	First vein near its apex abruptly bent backward parallel with apical portion of
	the auxiliary, stigma subquadrate, as wide as long
3.	Third vein bristly at least almost to small crossveins 4
	Third vein bare
4.	Last section of third vein strongly bowed upward 5
	Last section of third vein straightŒdicarena
5.	Apex of antennæ produced in the form of a sharp tooth at the lower front
	angleZonosema
	Apex of antennæ rounded
6.	Scutellum not swollen, its upper surface nearly flat
	Scutellum strongly swollen, wings banded
7.	Upper side of scutellum strongly convex, third vein bare
	Upper side of scutellum almost flat, third vein bristlyPeronyma
8.	Front and scutellum destitute of yellowish spines in addition to the usual
	bristles

	Front bearing three pairs of yellowish spines between the rows of frontal bristles, scutellum with three pairs of similar spines
9.	With, at most, four bristles on the scutellum
	With six bristles on the scutellum, front very broadXenochæta
10.	Wings unusually short and broad, black, thickly dotted with white or yellow-
	ish, the apex partly or wholly hyaline, the margins destitute of large hyaline indentations Eutreta
	Wings unusually narrow, yellowish, thickly covered with small brown spots,
	the disk destitute of pure hyaline spots, the margins partly brown and desti-
	tute of large hyaline indentations
	Wings neither unusually broad nor narrow, not marked like the aboveII
11.	The wings are hyaline except sometimes in the stigma
	The wings are almost or wholly hyaline except a brownish spot toward the
	apex which sends out several rays
	The wings not marked like these
I 2.	Brown on disk of wings containing many hyaline or yellowish dots or spots13
	Brown, containing only a few hyaline spots, the margins with several large
	hyaline indentations
	yellowish dots or spots
13.	Front longer than broad, not unusually broad.
	Front broader than long
14.	Margins of wings with large hyaline indentations usually composed of several
	dotsEurosta
	Margins destitute of such indentations
15.	Apex of first posterior cell broadly hyaline, at most with narrow brown border
	to the two veins.  Euaresta
16	Apex of this cell brown, or only a small portion hyaline
10.	Face not retreating, usually produced forward.  Aciura
17.	Cheeks posteriorly more than one-fourth as wide as the eye-height, under side
,	of head strongly convex
	Cheeks less than one-sixth as wide as the eye-height, under side of the head
	horizontal
18.	Third vein bristly at least almost to the small crossvein
	Third vein at most bristly at its extreme base
19.	Crossbands on disk of wings very oblique
	Crossbands almost or quite perpendicular